

Appl. No. 10/008,337
Amendment with Restriction Election
Reply to Office action of 6 March 2003

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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A method of fabricating an electronic device ~~(38)~~ comprising ~~the steps of~~:
- ~~(a)~~ forming a predetermined pattern of weakened regions ~~(6)~~ in a layer ~~(2)~~ of rigid material which define contiguous portions ~~(14)~~ of the rigid layer;
 - ~~(b)~~ providing electronic components ~~(12)~~ on the rigid layer ~~(2)~~; and
 - ~~(c)~~ forming flexible connectors ~~(16)~~ which extend between components ~~(12)~~ on different portions ~~(14)~~.
2. (currently amended) ~~A method of Claim~~ The method of claim 1 including the step of dividing the rigid layer ~~(2)~~ along the weakened regions ~~(6)~~.
3. (currently amended) ~~A method of Claim~~ The method of claim 1 including the step of mounting the rigid layer ~~(2)~~ over a flexible substrate ~~(18)~~.
4. (currently amended) ~~A method of Claim~~ The method of claim 1 wherein the connectors ~~(16)~~ are formed by electroplating metal onto the rigid layer ~~(2)~~.
5. (currently amended) ~~A method of Claim~~ The method of claim 4 wherein a seed layer ~~(20)~~ is deposited prior to electroplating the metal connectors ~~(16)~~.

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Q1 6. (currently amended) ~~A method of Claim~~ The method of claim 4 wherein areas of photoresist ~~(24,26,28)~~ are defined over the rigid layer ~~(2)~~ prior to electroplating the metal, such that portions of the connectors ~~(16)~~ form bridges over the photoresist, and the photoresist is subsequently removed.

7. (currently amended) A method of fabricating an electronic device ~~(38)~~ comprising the steps of:

~~(a)~~ providing electronic components ~~(12)~~ on a rigid layer ~~(2)~~;

~~(b)~~ forming flexible connectors ~~(16)~~ which extend between components ~~(12)~~ on different contiguous portions ~~(14)~~ of the rigid layer ~~(2)~~; and

~~(c)~~ dividing the rigid layer ~~(2)~~ into the contiguous portions ~~(14)~~.

8. (currently amended) ~~A method of Claim~~ The method of claim 7 including the step of mounting the rigid layer ~~(2)~~ over a flexible substrate ~~(18)~~.

9. (currently amended) ~~A method of Claim~~ The method of claim 7 wherein the connectors ~~(16)~~ are formed by electroplating metal onto the rigid layer ~~(2)~~.

10. (currently amended) ~~A method of Claim~~ The method of claim 9 wherein a seed layer ~~(30)~~ is deposited prior to electroplating the metal connectors ~~(16)~~.

11. (currently amended) ~~A method of Claim~~ The method of claim 9 wherein areas of photoresist ~~(24,26,28)~~ are defined over the rigid layer ~~(2)~~ prior to electroplating the metal, such that

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portions of the connectors ~~(16)~~ form bridges over the photoresist, and the photoresist is subsequently removed.

12. (currently amended) An electronic device ~~(38)~~ comprising a layer ~~(2)~~ of rigid material having electronic components ~~(12)~~ thereon, contiguous portions ~~(14)~~ of the rigid layer being defined by weakened regions ~~(6)~~ of the rigid layer ~~(2)~~, and flexible connectors ~~(16)~~ extending between components ~~(12)~~ on different portions ~~(14)~~.

13. (currently amended) ~~A device of Claim~~ The device of claim 12 wherein the weakened regions comprise grooves ~~(6,21)~~ in one or both faces ~~(8,10)~~ of the rigid layer ~~(2)~~.

14. (currently amended) ~~A device of Claim~~ The device of claim 12 wherein the rigid layer ~~(2)~~ is mounted over a flexible substrate ~~(18)~~.

15. (currently amended) ~~A device of Claim~~ The device of claim 12 wherein the connectors ~~(16)~~ comprise electroplated metal.

16. (currently amended) ~~A device of Claim~~ The device of claim 12 wherein the connectors ~~(16)~~ comprise a bridge-like portion.

17. An electronic device ~~(38)~~ comprising a layer ~~(2)~~ of rigid material having electronic components ~~(12)~~ thereon, and flexible connectors ~~(16)~~ extending between components on different contiguous portions ~~(14)~~ of the rigid layer, the rigid layer ~~(2)~~ being divided into the contiguous portions ~~(14)~~ such that the device ~~(38)~~ is flexible.

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18. (currently amended) ~~A device of Claim~~ The device of claim
17 wherein the rigid layer ~~(2)~~ has been divided into the
contiguous portions ~~(14)~~ along weakened regions ~~(6)~~ of the
rigid layer.

19. (currently amended) ~~A device of Claim~~ The device of claim
18 wherein the weakened regions comprise grooves ~~(6,21)~~ in one
or both faces ~~(8,10)~~ of the rigid layer ~~(2)~~.

20. (currently amended) ~~A device of Claim~~ The device of claim
17 wherein the rigid layer ~~(2)~~ is mounted over a flexible
substrate ~~(10)~~.

21. (currently amended) ~~A device of Claim~~ The device of claim
17 wherein the connectors ~~(16)~~ comprise electroplated metal.

22. (currently amended) ~~A device of Claim~~ The device of claim
17 wherein the connectors ~~(16)~~ comprise a bridge-like portion.

23. (currently amended) An article ~~(42)~~ having an electronic
device ~~(38)~~ mounted thereon, the electronic device ~~(38)~~
comprising a layer ~~(2)~~ of rigid material having electronic
components ~~(12)~~ thereon, contiguous portions ~~(14)~~ of the rigid
layer being defined by weakened regions ~~(6)~~ of the rigid layer
~~(2)~~, and flexible connectors ~~(16)~~ extending between components
~~(12)~~ on different portions ~~(14)~~.

24. (currently amended) An article ~~(42)~~ having an electronic
device ~~(38)~~ mounted thereon, the electronic device ~~(38)~~
comprising a layer ~~(2)~~ of rigid material having electronic
components ~~(12)~~ thereon, and flexible connectors ~~(16)~~ extending

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between components on different contiguous portions ~~(14)~~ of the
rigid layer, the rigid layer ~~(2)~~ being divided into the
contiguous portions ~~(14)~~ such that the device ~~(38)~~ is flexible.